

Patentkrav

-Claims

1. Apparatus for separating steam from a mixture of steam and fibres, comprising an elongated feeding compartment
5 (12) having an inlet arranged between the short sides of the elongated feeding compartment and feeding means (10) for feeding a mixture of steam and fibres through said inlet, **characterized in** that the feeding means comprises a tubular section (18) which is curved such that the mixture
10 of steam and fibres during passage in the tubular section (18) is separated during influence of centrifugal forces in a substantially relatively heavy steam-less fraction of fibres in a radially outer layer (20) and in a substantially light fibre-free fraction of steam in a
15 radially inner layer (22), the tubular section is arranged in such a way that heavy fraction of fibres is fed through the inlet peripherally (P) into the elongated feeding compartment of the apparatus, while the separated light fraction of steam is fed through the inlet against the
20 centre (C) of the elongated feeding compartment and removed through an outlet (23,24) of the apparatus.

2. Apparatus according to claim 1, **characterized in** that the tubular section (18) is adapted such that the
25 difference in velocity, between the velocity of the fibres in the feeding means in relation to the velocity of a conveyor worm arranged in the elongated feeding compartment, is minimized.

30 3. Apparatus according to claim 1 or 2, **characterized in** that the apparatus comprises an inwards radially extending wall section (26) from an inner surface (16') in the elongated feeding compartment, that defines a rear chamber

(27) in the apparatus to which the radial outlet (24) is connected, through which outlet the steam is removed.

4. Apparatus according to any of the preceding claims,
5 **characterized in** that the feeding means has a substantially straight, linear elongated outer tubular portion (30), having an extension (H), which outer portion (30) is positioned adjacent an opposite end (31) compared to the end of the curved tubular section (18) that is
10 connected to the inlet (14).

5. Apparatus according to claim 4, **characterized in** that the extension (H) of the feeding means forms an angle between 75-90° in relation to the longitudinal extension
15 (L) of the apparatus.

6. Apparatus according to any of the preceding claims, **characterized in** that the inlet is arranged tangentially at the periphery (16) of the apparatus.

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7. Apparatus according to any of the preceding claims, **characterized in** that the cross-sectional area of the inlet and the feeding means is quadratic or rectangular.

25 8. Feeding means (10) for use in an apparatus as defined in any of the preceding claims, for feeding a mixture of steam and fibres through the inlet of the apparatus, **characterized in** that the feeding means comprises a tubular section (18) which is curved such that the mixture
30 of steam and fibres during passage in the tubular section (18) is separated during influence of centrifugal forces in a substantially relatively heavy steam-less fraction of fibres in a radially outer layer (20) and in a

substantially light fibre-free fraction of steam in a radially inner layer (22).

9. Feeding means according to claim 8, **characterized in**
5 that the curved tubular section (18) is adapted such that the difference in velocity, between the velocity of the fibres in the feeding means in relation to the velocity of the fibres within the apparatus, is minimized.

10 10. Feeding means according to claim 8 or 9, **characterized in** that the feeding means has a substantially straight, linear elongated outer tubular portion (30), having an extension (H), which outer portion (30) is adjacent an opposite end (31) compared to the end of the curved
15 tubular section (18) that is connected to the inlet (14).

11. Feeding means according to any of claims 8-10, **characterized in** that the extension (H) of the feeding means forms an angle between 75-90° in relation to the
20 longitudinal extension (L) of the apparatus.

12. Feeding means according to any of claims 8-11, **characterized in** that the cross-sectional area of the feeding means is quadratic or rectangular.

25 13. A method for feeding a mixture of steam and fibres to an elongated feeding compartment (12) of an apparatus for separating steam from a mixture of steam and fibres, where the mixture of steam and fibres are fed via a feeding
30 means (10) through an inlet (14) arranged between the short sides of the elongated feeding compartment, **characterized in** that the feeding means comprises a tubular section (18) which is curved, whereby the mixture of steam and fibres at passage in the tubular section (18)

is brought to separate during influence of centrifugal forces in a substantially relatively heavy steam-less fraction of fibres in a radially outer layer (20) and in a substantially light fibre-free fraction of steam in a radially inner layer (22), the tubular section is arranged in such a way that heavy fraction of fibres is fed through the inlet peripherally (P) into elongated feeding compartment of the apparatus, while the separated light fraction of steam is fed through the inlet against the centre (C) of the elongated feeding compartment and removed through an outlet (23,24) of the apparatus.